

# **EXHIBIT J**

# EXHIBIT 6

*Entropic Communications, LLC v. Cox Communications, Inc., et al.*  
Case 2:23-cv-01049-JWH-KES (C.D. Cal.)

**U.S. Patent No. 8,792,008 (the “’008 Patent”) Exemplary Infringement Chart**

Cox operates and maintains a nationwide television and data network through which it sells, leases, and offers for sale products and services, including the Technicolor CGM4981, Technicolor CGM4331, Technicolor CGM4141, Technicolor CVA4004, ARRIS / Surfboard TM3402, ARRIS / Surfboard G36, ARRIS / Surfboard G54, ARRIS / Surfboard S33, ARRIS / Surfboard CM8200, ARRIS / Surfboard G34, ARRIS / Surfboard SB8200, ARRIS / Surfboard DG2460, ARRIS TM9202, Hitron CODA56, Hitron CODA, Humax HGD310, Motorola B12, Motorola MB8611, Motorola MG8725, Motorola MB8600, Motorola MG8702, Netgear CM2000, Netgear C7800, Netgear CAX30, Netgear CAX80, Netgear CBR750, Netgear CM1000, Netgear CM1000v2, Netgear CM1100, Netgear CM1200, Netgear CM2500, Netgear CM3000, Ubiquiti UCI, ARRIS / Surfboard TG2472, ARRIS / Surfboard SBG7400AC2, ARRIS / Surfboard SBG7600AC2, Motorola MB7621, Motorola MG7700, Netgear C6900, Netgear C7000v2, Netgear C7500, Netgear CBR40, Netgear CM600, Netgear CM700, TP-LINK TC-7650, ARRIS / Surfboard SB6183, ARRIS / Surfboard SBG6900, Asus CM16, Motorola MB7420, Motorola MG7540, Motorola MG7550, Netgear C6230, Netgear C6250, Netgear C6300, Netgear C6300v2, Netgear CM500, TP-LINK TC-7620, TP-LINK CR500, TP-LINK CR700, TP-LINK CR1900, SMC D3CM1604, Zoom 5370, and products that operate in a similar manner (“Accused Cable Modem Products”), as well as the Arris AX013ANC STB, Arris AX013ANM STB, Pace PX022ANC STB, Pace PX022ANM STB, Samsung SX022ANC STB, Samsung SX022ANM STB, and products that operate in a similar manner (“Accused Set Top Products”). Cox provides cable television and internet services (“Accused Services”) via the lease, sale, and/or distribution of the Accused Cable Modem Products and/or the Accused Set Top Products. Cox literally and/or under the doctrine of equivalents infringes the claims of the ’008 Patent by making, using, selling, offering for sale, and/or importing the Accused Services, Accused Cable Modem Products, and/or the Accused Set Top Products.

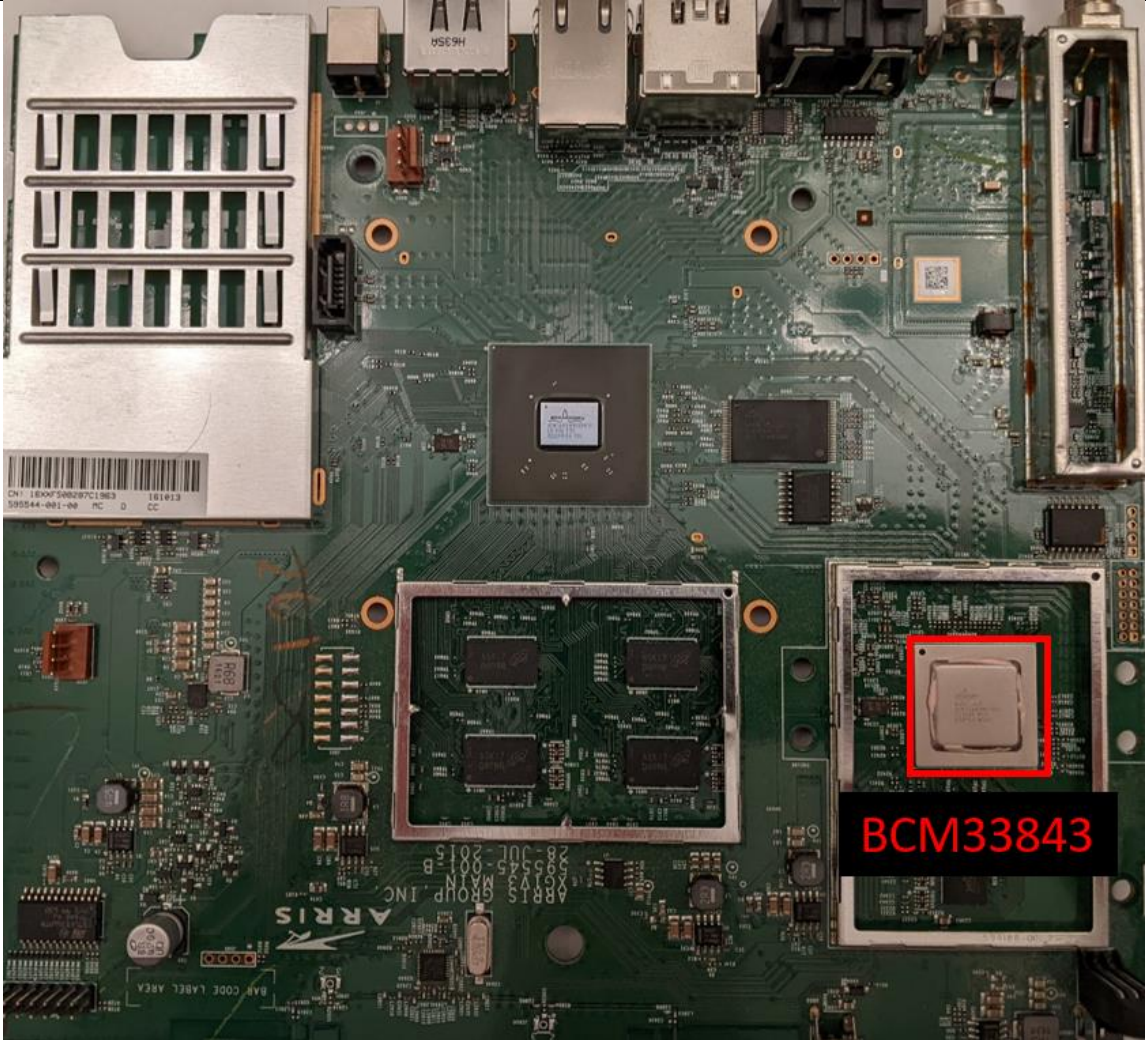
As shown below in the chart with exemplary support, the Accused Services infringe at least claims 1-6, 9, and 10 of U.S. Patent No. 8,792,008 (“’008 Patent”). The ’008 Patent was filed September 10, 2012, issued July 29, 2014, and is entitled “Method and Apparatus for Spectrum Monitoring.” The ’008 Patent claims priority to U.S. Provisional Patent Application No. 61/532,098, entitled “Method and Apparatus for Spectrum Monitoring” and filed on September 8, 2011. Furthermore, the claims of the ’008 Patent are entitled to a conception date of at least as early as February 15, 2011.

The Accused Set Top Products and the Accused Cable Modem Products infringe the claims of the ’008 Patent, as described below, either directly under 35 U.S.C. § 271(a), or indirectly under 35 U.S.C. §§ 271(b)–(c).

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<b>1pre</b>	1. A system comprising:	<p>The Accused Services are provided by the claimed system by utilizing, for example, the Accused Set Top Products, which include at least one set top box (“STB”) located at each subscriber location, including, for example, the Arris AX013ANC STB, Arris AX013ANM STB, Pace PX022ANC STB, Pace PX022ANM STB, Samsung SX022ANC STB, Samsung SX022ANM STB, and products that operate in a similar manner, and products that operate in a similar manner.</p> <p>By way of example, the Arris AX013ANM is charted herein. As described below, the Arris AX013ANM has a Broadcom BCM33843 SoC. On informed belief, the Arris AX013ANM is representative of all Accused Set Top Products, including those having BCM3383, BCM3384, BCM33843, or BCM3390 SoCs.</p>
<b>1a</b>	an analog-to-digital converter operable to digitize a received signal spanning an entire television spectrum comprising a plurality of television channels, said digitization resulting in a digitized signal;	<p>The Accused Set Top Products have an analog-to-digital converter operable to digitize a received signal spanning an entire television spectrum comprising a plurality of television channels, said digitization resulting in a digitized signal as described below.</p> <p>Specifically, the Arris AX013ANM has applicable circuitry and/or software modules constituting an analog to digital converter. For example, the Arris AX013ANM has a Broadcom BCM33843 SoC, highlighted in red below.</p>

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		<p>The Arris AX013ANM receives the entire 1GHz downstream spectrum of a Cox cable plant. The 1 GHz cable spectrum includes a plurality of television channels. The Arris AX013ANM digitizes the entire received signal; the digitization results in a digitized signal.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom’s new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843” (ENTROPIC_COX_002016 at ENTROPIC_COX_002017)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
<b>1b</b>	a signal monitor operable to:	<p>The Accused Set Top Products have has circuitry and/or applicable software modules constituting a signal monitor as described below.</p> <p>Specifically, the Arris AX013ANM has applicable circuitry and/or software modules constituting a signal monitor. For example, the Arris AX013ANM has a Broadcom BCM33843</p>

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		<p>SoC, which provides real time, unobtrusive diagnostic and spectrum analysis capabilities for an entire digitized signal.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom’s new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843” (ENTROPIC_COX_002016 at ENTROPIC_COX_002017)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
<b>1c</b>	analyze said digitized signal to determine a characteristic of said digitized signal; and	<p>The Accused Set Top Products analyze said digitized signal to determine a characteristic of said digitized signal as described below.</p> <p>Specifically, the Arris AX013ANM includes remote diagnostics capabilities that provide real time, unobtrusive diagnostic and spectrum analysis capabilities. The Arris AX013ANM analyzes, using the signal monitor, said digitized signal to determine a characteristic of said</p>



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		<p>digitized signal. On informed belief, the Arris AX013ANM determines characteristics of the digitized signal, such as signal strength and/or signal power vs. frequency.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom’s new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843” (ENTROPIC_COX_002016 at ENTROPIC_COX_002017)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
<b>1d</b>	report said determined characteristic to a source of said received signal;	<p>The Accused Set Top Products report said determined characteristic to a source of said received signal as described below.</p> <p>Specifically, the Arris AX013ANM includes remote diagnostics capabilities that provide real time, unobtrusive diagnostic and spectrum analysis capabilities. Upon information and belief, the Arris AX013ANM reports said determined characteristic to a source of said received signal, i.e. servers and/or services provided by and/or operated by Cox. On informed belief, Cox</p>



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		<p>operates a PNM system that requests and obtains the determined characteristics and utilizes software algorithms to diagnose issues in the cable plant and proactively resolve these issues even if no report has been received from a customer.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom’s new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843”</p> <p>(ENTROPIC_COX_002016 at ENTROPIC_COX_002017)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.”</p> <p>(ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>“Wideband spectrum analysis has been demonstrated widely in the field as a very useful PNM tool which provides for a spectrum analyzer capability in CMs at as many locations as possible in the plant. Full-band capture in silicon permits the display to encompass the entire downstream spectrum. Figure 4 shows a spectrum of the received downstream signal at a CM. In this case, we observe fluctuations across the band in carrier amplitude, including a group of bonded carriers around 630 MHz with higher power than their neighbors. We see vacancies in the spectrum, and locations where unmodulated analog video carriers are used as pilots. The overall slope of the spectrum is generally flat; no major up-slope or downslope is seen and no appreciable ripple. We see a notch around 720 MHz indicating a power “suckout” that would cause a service outage on those channels. These determinations may be automated by software</p>

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		<p>algorithms to analyze the spectral information. Clearly this plant requires maintenance, even if no call has yet been received from a customer.” (ENTROPIC_COX_002919 at ENTROPIC_COX_002925)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
1e	a data processor operable to process a television channel to recover content carried on the television channel; and	<p>The Arris AX013ANM has a data processor operable to process a television channel to recover content carried on the television channel as described below.</p> <p>Specifically, the Arris AX013ANM has circuitry and/or applicable software modules constituting a data processor operable to process a television channel to recover content carried on the television channel. For example, the Arris AX013ANM has a Broadcom BCM33843 SoC. In the Arris AX013ANM, each digitally tuned television channel is provided to a digital demodulator that outputs a transport stream for use in broadcast services.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom’s new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843” (ENTROPIC_COX_002016 at ENTROPIC_COX_002017)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive</p>

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		<p>diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
<b>1f</b>	a channelizer operable to:	<p>The Accused Set Top Products have a channelizer as described below.</p> <p>Specifically, the Arris AX013ANM has circuitry and/or applicable software modules constituting a channelizer. For example, the Arris AX013ANM has a Broadcom BCM33843 SoC.</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
<b>1g</b>	select a first portion of said digitized signal;	The Accused Set Top Products select a first portion of said digitized signal as described below.

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		<p>Specifically, the Arris AX013ANM includes advanced signal processing techniques that can be used to digitally select multiple channels simultaneously, including selecting a first portion of said digitized signal. <i>See</i> element 1b-d.</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
1h	select a second portion of said digitized signal; and	<p>The Accused Set Top Products select a second portion of said digitized signal as described below.</p> <p>Specifically, the Arris AX013ANM includes advanced signal processing techniques that can be used to digitally select multiple channels simultaneously, including selecting a second portion of said digitized signal. <i>See</i> element 1e.</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p>

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		<p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
<b>1i</b>	<p>concurrently output said first portion of said digitized signal to said signal monitor and said second portion of said digitized signal to said data processor.</p>	<p>The Accused Set Top Products concurrently output said first portion of said digitized signal to said signal monitor and said second portion of said digitized signal to said data processor as described below.</p> <p>Specifically, the Arris AX013ANM includes remote diagnostics capabilities that provide real time, unobtrusive diagnostic and spectrum analysis capabilities without affecting user service on any downstream channels. As described above, the first portion of said digitized signal is output to said signal monitor and said second portion of said digitized signal is output to said data processor. Accordingly, the Arris AX013ANM concurrently outputs said first portion of said digitized signal to said signal monitor and said second portion of said digitized signal to said data processor.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom’s new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843” (ENTROPIC_COX_002016 at ENTROPIC_COX_002017)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive</p>

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		<p>diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
2	2. The system of claim 1, wherein said first portion of said digitized signal spans said entire television spectrum.	See 1g.
3pre	A method comprising:	<p>The Accused Services are provided by the claimed system by utilizing, for example, the Accused Set Top Products, which include at least one set top box (“STB”) located at each subscriber location, including, for example, the Arris AX013ANC STB, Arris AX013ANM STB, Pace PX022ANC STB, Pace PX022ANM STB, Samsung SX022ANC STB, Samsung SX022ANM STB, and products that operate in a similar manner, and/or the Accused Cable Modem Products including, for example, the Technicolor CGM4981, Technicolor CGM4331, Technicolor CGM4141, Technicolor CVA4004, ARRIS / Surfboard TM3402, ARRIS / Surfboard G36, ARRIS / Surfboard G54, ARRIS / Surfboard S33, ARRIS / Surfboard CM8200, ARRIS / Surfboard G34, ARRIS / Surfboard SB8200, ARRIS / Surfboard DG2460, ARRIS TM9202, Hitron CODA56, Hitron CODA, Humax HGD310, Motorola B12, Motorola MB8611, Motorola MG8725, Motorola MB8600, Motorola MG8702, Netgear CM2000, Netgear C7800, Netgear CAX30, Netgear CAX80, Netgear CBR750, Netgear CM1000, Netgear CM1000v2, Netgear</p>

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		<p>CM1100, Netgear CM1200, Netgear CM2500, Netgear CM3000, Ubiquiti UCI, ARRIS / Surfboard TG2472, ARRIS / Surfboard SBG7400AC2, ARRIS / Surfboard SBG7600AC2, Motorola MB7621, Motorola MG7700, Netgear C6900, Netgear C7000v2, Netgear C7500, Netgear CBR40, Netgear CM600, Netgear CM700, TP-LINK TC-7650, ARRIS / Surfboard SB6183, ARRIS / Surfboard SBG6900, Asus CM16, Motorola MB7420, Motorola MG7540, Motorola MG7550, Netgear C6230, Netgear C6250, Netgear C6300, Netgear C6300v2, Netgear CM500, TP-LINK TC-7620, TP-LINK CR500, TP-LINK CR700, TP-LINK CR1900, SMC D3CM1604, Zoom 5370, and products that operate in a similar manner, located at each subscriber location.</p> <p>By way of example, the Technicolor CGM4141 cable modem is charted herein. As described below, the Technicolor CGM4141 has a Broadcom BCM3390 SoC. On informed belief, all devices deployed by or enabled by Cox that contain the BCM3383, BCM3384, and BCM33843 series chips operate substantially the same as the BCM3390 series chips for purposes of the '008 Patent. As there are no functional differences between the BCM33843 SoC and BCM3390 SoC that impacts infringement of the '008 Patent, documents describing the operation of the BCM33843 SoC equally describe the operation of the BCM3390 SoC.</p> <p>Therefore, the Technicolor CGM4141 is representative of all Accused Set Top Products and Accused Cable Modem Products, including those having BCM3383, BCM3384, BCM33843, or BCM3390 SoCs.</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
3a	performing by one or more circuits:	The Accused Set Top Products and the Accused Cable Modem Products have one or more circuits that perform the claimed method as described below.



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		<p>Specifically, the Technicolor CGM4141 includes applicable circuitry and/or software modules performing the claimed method. For example, the Technicolor CGM4141 has a Broadcom BCM3390 SoC.</p> 

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<b>3b</b>	receiving a signal having a bandwidth that spans from a first frequency, $F_{lo}$ , to a second frequency, $F_{hi}$ , wherein said signal carries a plurality of channels;	<p>The Accused Set Top Products and the Accused Cable Modem Products perform the method of receiving a signal having a bandwidth that spans from first frequency, <math>F_{lo}</math>, to a second frequency, <math>F_{hi}</math>, wherein said signal carries a plurality of channels as described below.</p> <p>The Technicolor CGM4141 includes applicable circuitry and/or software modules providing an analog to digital converter, for example a Broadcom BCM3390 SoC. The Technicolor CGM4141 receives the entire ~1GHz downstream spectrum of the Cox cable plant. The 1 GHz cable spectrum includes a plurality of channels. On informed belief, the plurality of channels includes television channels and data channels. The Technicolor CGM4141, using its applicable circuitry and/or software modules, digitizes the entire received signal resulting in a digitized signal.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom’s new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843” (ENTROPIC_COX_002016 at ENTROPIC_COX_002017)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the</p>

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		claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.
3c	digitizing said received signal from $F_{lo}$ to $F_{hi}$ to generate a digitized signal;	<p>The Accused Set Top Products and the Accused Cable Modem Products perform the method of digitizing said received signal from <math>F_{lo}</math> to <math>F_{hi}</math> to generate a digitized signal as described below.</p> <p>The Technicolor CGM4141 includes applicable circuitry and/or software modules providing an analog to digital converter, for example a Broadcom BCM3390 SoC. The Technicolor CGM4141 receives the entire ~1GHz downstream spectrum of a Cox cable plant. The Technicolor CGM4141, using its applicable circuitry and/or software modules, digitizes the entire received signal resulting in a digitized signal.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom’s new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843” (ENTROPIC_COX_002016 at ENTROPIC_COX_002017)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the</p>

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		claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.
<b>3d</b>	selecting a first portion of said digitized signal;	<p>The Accused Set Top Products and the Accused Cable Modem Products perform the method of selecting a first portion of said digitized signal as described below.</p> <p>The Technicolor CGM4141 includes applicable circuitry and/or software modules for selecting a first portion of the digitized signal, for example a Broadcom BCM3390 SoC. <i>See</i> element 1b-d.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom’s new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843” (ENTROPIC_COX_002016 at ENTROPIC_COX_002017)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
<b>3e</b>	selecting a second portion of said digitized signal; and	The Accused Set Top Products and the Accused Cable Modem Products perform the method of selecting a first portion of said digitized signal as described below.

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		<p>The Technicolor CGM4141 includes applicable circuitry and/or software modules for selecting a second portion of the digitized signal, for example a Broadcom BCM3390 SoC. <i>See</i> element 1e.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom’s new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843” (ENTROPIC_COX_002016 at ENTROPIC_COX_002017)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
3f	concurrently outputting said selected first portion and said selected second portion, wherein:	The Accused Set Top Products and the Accused Cable Modem Products perform the method of concurrently outputting said selected first portion and said selected second portion as described below.

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		<p>The Technicolor CGM4141 includes applicable circuitry and/or software modules for concurrently outputting said selected first portion and said selected second portion, for example a Broadcom BCM3390 SoC. For example, the Technicolor CGM4141 can provide the selected first portion to applicable circuitry and/or software modules for providing diagnostic and spectrum analysis capabilities without affecting service on any downstream channels while concurrently processing the selected second portion to recover data conveyed in the selected second portion.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom’s new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843” (ENTROPIC_COX_002016 at ENTROPIC_COX_002017)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>



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<b>3g</b>	said selected first portion is output to a signal analyzer which analyzes said selected first portion to determine one or more characteristics of the received signal,	<p>The Accused Set Top Products and the Accused Cable Modem Products perform the method of concurrently outputting said selected first portion to a signal analyzer which analyzes said selected first portion to determine one or more characteristics of the received signal and which reports said determined one or more characteristics to a source of said received signal as described below.</p> <p>The Technicolor CGM4141 includes applicable circuitry and/or software modules operable as a signal monitor. This includes diagnostic features such as spectrum analysis for the entire input band. On informed belief, the Technicolor CGM4141 can analyze the digitized signal as a single band or in segments. When the digitized signal is analyzed in segments, applicable circuitry and/or software modules of the Technicolor CGM4141 analyze a sequence of segments of the entire digitized signal and the individual analysis segments are combined to monitor the entire digitized signal. On informed belief, the Technicolor CGM4141 determines characteristics of the digitized signal, such as signal strength and/or signal power vs. frequency.</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>



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3h	and which reports said determined one or more characteristics to a source of said received signal; and	<p>The Accused Set Top Products and the Accused Cable Modem Products perform the method of reporting said determined one or more characteristics to a source of said received signal as described below.</p> <p>Specifically, the Technicolor CGM4141, using its applicable circuitry and/or software modules, is operable to report the determined one or more characteristic to a source of said received signal. The Technicolor CGM4141 sends the results of the analysis of the digitized signal, including the determined characteristic, to servers and/or systems provided by and/or operated by Cox. On informed belief, the Technicolor CGM4141 provides information to a PNM system operated by Cox. This allows the received signals to be analyzed at a customer's premises (e.g., where the Technicolor CGM4141 is located) and the characteristics of the received signals can be remotely analyzed without driving to the customer's premises or accessing the in-home wiring.</p> <p>"Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels."</p> <p>(ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>"Wideband spectrum analysis has been demonstrated widely in the field as a very useful PNM tool which provides for a spectrum analyzer capability in CMs at as many locations as possible in the plant. Full-band capture in silicon permits the display to encompass the entire downstream spectrum. Figure 4 shows a spectrum of the received downstream signal at a CM. In this case, we observe fluctuations across the band in carrier amplitude, including a group of bonded carriers around 630 MHz with higher power than their neighbors. We see vacancies in the spectrum, and locations where unmodulated analog video carriers are used as pilots. The overall slope of the spectrum is generally flat; no major up-slope or downslope is seen and no appreciable ripple. We see a notch around 720 MHz indicating a power "suckout" that would</p>

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		<p>cause a service outage on those channels. These determinations may be automated by software algorithms to analyze the spectral information. Clearly this plant requires maintenance, even if no call has yet been received from a customer.” (ENTROPIC_COX_002919 at ENTROPIC_COX_002925)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
3i	<p>said selected second portion is output to a data processor for recovery of data carried on one or more of said plurality of channels.</p>	<p>The Accused Set Top Products and the Accused Cable Modem Products perform the method of concurrently outputting said selected second portion to a data processor for recovery of data carried on one or more of said plurality of channels as described below.</p> <p>The Technicolor CGM4141 includes applicable circuitry and/or software modules that function as a data processor operable to process a channel to recover content carried on the channel. For example, Technicolor CGM4141 includes Broadcom BCM3390 SoC implementing, via its circuitry and/or applicable software modules, a tuner, a demodulator and/or a decoder. For example, the Technicolor CGM4141, using its applicable circuitry and/or software modules, can process one or more channels to recover a data carried on the channel (s).</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COX_002016 at ENTROPIC_COX_002018)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the</p>

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		claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.
4	The method of claim 3, wherein said first portion comprises all of said received signal from $F_{lo}$ to $F_{hi}$ .	See 3h.
5	The method of claim 3, wherein said one or more characteristics is one of: signal power vs. frequency, phase vs. frequency, signal-to-noise ratio, peak-to-average ratio, noise levels, bit error rate, and symbol error rate.	See 3g.
6	The method of claim 3, wherein: said received signal is a cable television signal; and said plurality of channels comprises a plurality of television channels.	See 3b.
9	The method of claim 3, wherein said one or more circuits reside in a customer premises gateway.	The one or more circuits reside in a customer premises gateway as described below.

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		<p>Specifically, the Accused Set Top Products and the Accused Cable Modem Products, for example the Technicolor CGM4141 constitutes a customer premises gateway. For example, the Technicolor CGM4141 includes applicable circuitry and/or software modules constituting the one or more circuits.</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
10	The method of claim 3, wherein a bandwidth and/or center frequency of said selected first portion is configurable during operation of said one or more circuits.	See 3g.